

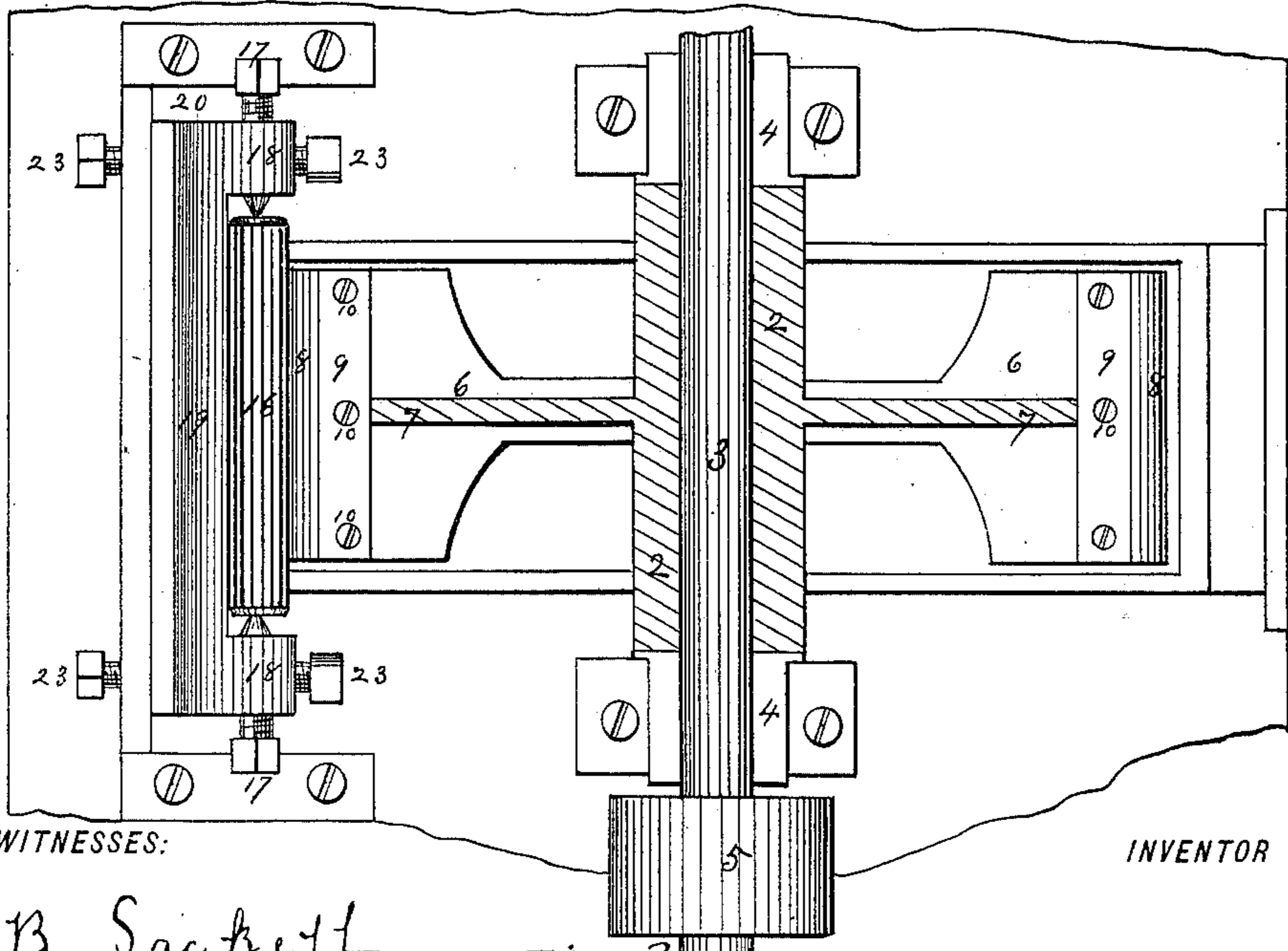
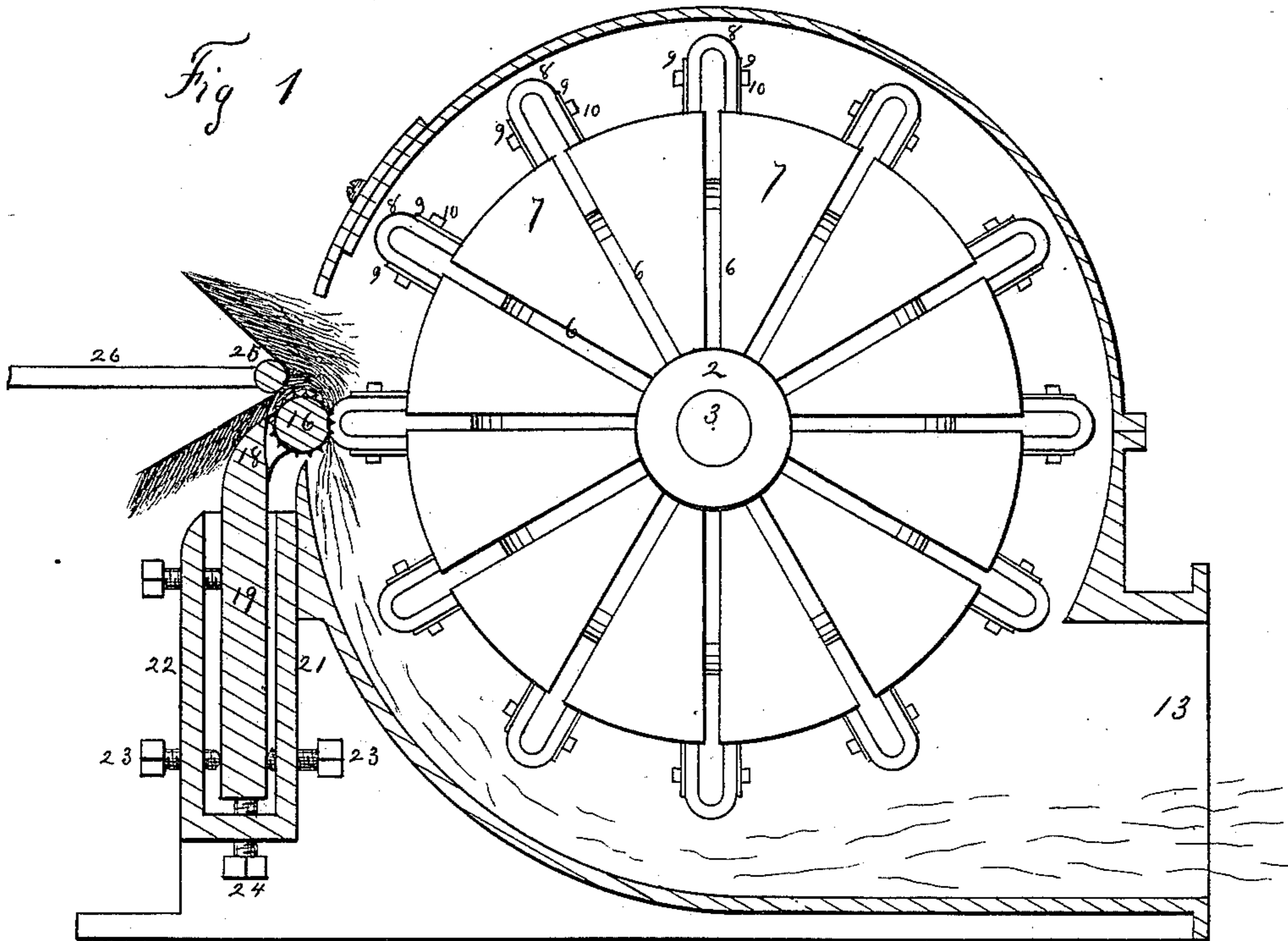
(No Model.)

2 Sheets—Sheet 1.

C. E. SACKETT.
FUR PLUCKING MACHINE.

No. 566,343.

Patented Aug. 25, 1896.



WITNESSES:

INVENTOR

M. B. Sackett
H. W. Sackett

Fig. 2.

Chas. E. Sackett

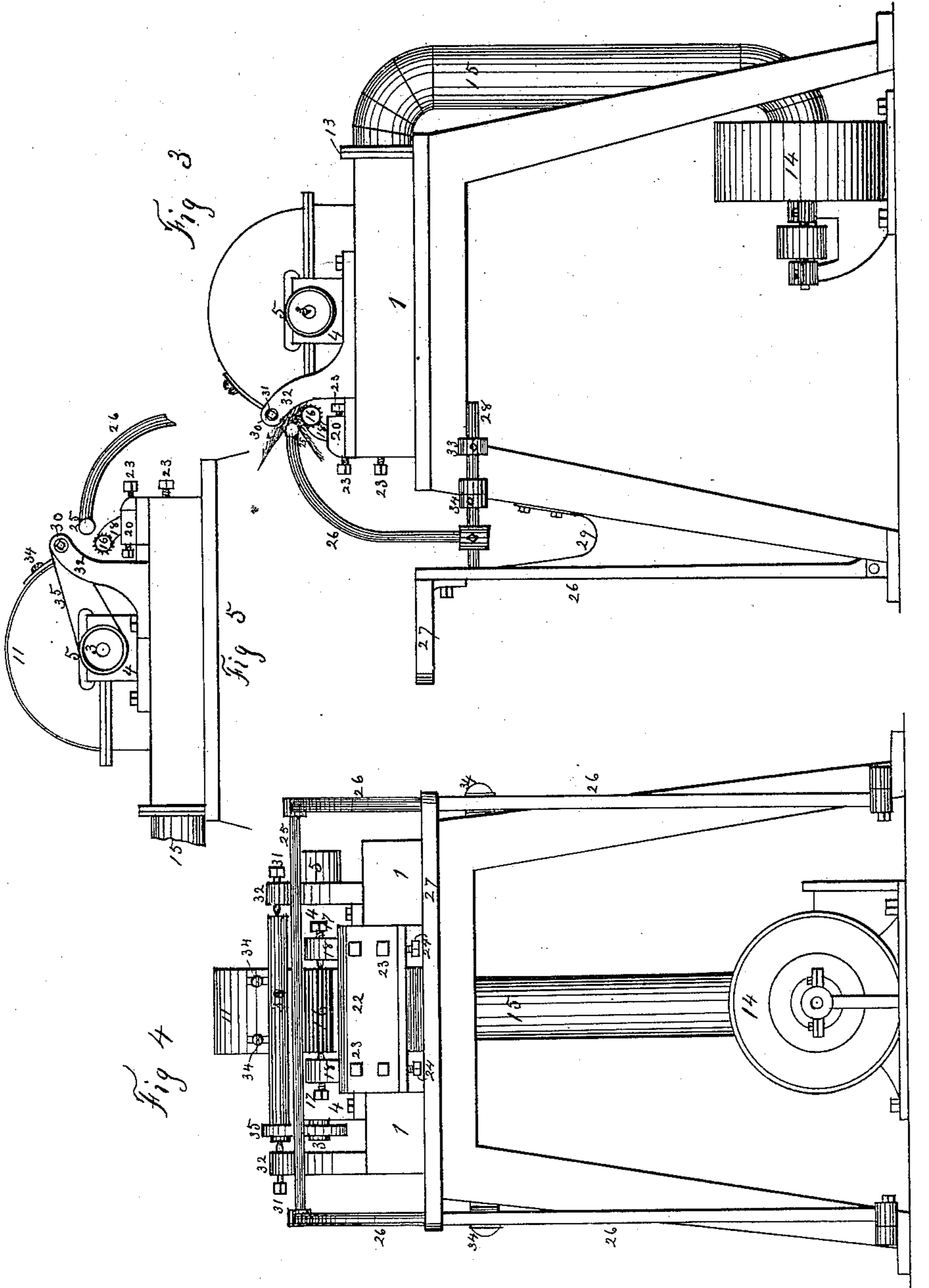
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UNITED STATES PATENT OFFICE.

CHARLES E. SACKETT, OF DANBURY, CONNECTICUT.

FUR-PLUCKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 566,343, dated August 25, 1896.

Application filed January 18, 1895. Serial No. 535,372. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SACKETT, a citizen of the United States, residing in Danbury, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Fur-Plucking Machines; and I do hereby declare that the following specification, in connection with the accompanying drawings, is a full, clear, and exact description of the same.

Numerous machines have been devised for this purpose. Those operating most successfully aim to imitate mechanically the process still in general use of plucking skins by hand, wherein the plucker grips the hair between an elastic tube attached to his thumbs and the side or edge of a dull knife manipulated by his fingers and by constant intermittent gripping and pulling removes the projecting hair from the pelt without injury to the fur. The machines now doing the best practical work combine a rotary elastic roller and a parallel rotary shaft situated below it, to which are attached knife-blades between which the fur is gripped and pulled. In some cases the elastic roller has a reciprocatory motion to and from the knife-blades. These machines require a blade or comb placed in front of the plucking mechanism to lift the hair, which is objectionable, as it hides the plucking action from the operator, and as that action takes place beneath the vertical center of the upper roll both roll and knives have to be of small diameter for the hair to reach their vertical centers at all. Where rotary knives are used only a very small area of gripping contact can be obtained against any elastic roll, barely the edge of but one knife at a time, or it would soon cut into the material of the roll. Therefore if the knife-edge is at all irregular or the surface of the roll becomes irregularly worn, spaces occur which do not grip the hair and very irregular action takes place, requiring many repetitions of the process.

The object of my invention is to do away with knives, to get a double or triple nip on the hair by forcing it into the depressions of a fluted roll, to get the pulling action to the front of the machine, where it can be observed by the operator, to be able to use as large an elastic surface as may be desired, and to

have a series of independent surfaces so placed as to generate a wind-current rather than one continuous pull, and generally to improve upon the devices now in use.

In the accompanying drawings like figures refer to like parts.

Figure 1 is a sectional side view of the plucking mechanism. Fig. 2 is a sectional plan view of the same. Fig. 3 is an outside side view of the complete machine. Fig. 4 is an outside front view of the same. Fig. 5 shows the manner of driving the upper roll.

1 is a table, of any suitable construction, to support the machine.

2 is a wheel or hub revolving upon its axis 3, journaled in boxes 4 4 and having a pulley-wheel 5 at one extremity of its axis, by which it is rotated. Projecting from this hub at suitable distances are spokes 6 6 6, shaped as fan-blades, broad and thin. They are preferably braced and connected by a central web 7, beyond which they extend a suitable distance to receive the elastic buffers 8 8 8, which are preferably strips of pure rubber bent around their rounded extremities and secured in position by the clamping-plates 9 9 and screws or bolts 10. Any number of spokes or buffers may be used, built up to form a wheel of any reasonable diameter. This wheel I inclose in a case 11, shaped as is usual in exhaust-fans, it being the intent of this construction to act as an exhaust-fan. In the periphery of the case at 12 I leave an inlet-passage for air. This passage is regulated by a slide 33, as shown in Fig. 1, provided with slots and screws 34 for fastening it in any position. I also provide the usual exhaust-outlet at 13. Air also may be admitted at the side, centers, or any other desirable point, the main object being to provide a strong suction at the inlet-orifice 12. In order to insure the removal of the hair, I also provide the auxiliary exhaust-fan 14, which may be connected to the outlet 13 by the wind-pipe 15 for that purpose. In front of the elastic buffers as they revolve past the opening 12, which is made preferably at about their middle height, I place a small roller 16, having a fluted surface to produce dull edges and shallow depressions preferably parallel with the axis of the roll, into which depressions the elastic material of the buffers may sink and thus bend and hold the hairs

to be plucked over a series of edges and depressions, whereby a series of twists or nips will be obtained upon them. The roll 16 may be of quite small diameter relatively to the diameter of revolution of the buffers. It is mounted from the table 1 to revolve very freely, preferably in end centers 17 17, carried in stanchions 18 18, which form part of a plate 19. This plate is inclosed by side guide-pieces 20 20, which hold it in position laterally, and by a back plate 21 and front plate 22, between which it has a limited movement to and from the elastic buffers. This movement is controlled by the set-screws 23 23 23, inserted in the back and front plates, between which the plate 19 and with it the roll 16 are brought into any desired degree of pressed relation against the elastic buffers and rigidly held there by setting the screws 23. There are also two set-screws 24 24 below the plate 19, which serve to adjust the height of the roll relatively to the elastic buffers. The roll 16 is preferably actuated by being buffed by the elastic buffers as they revolve swiftly past it, and as they are in pressed relation to it such motion is inevitable and insures the movement of the surface of the roll and the surface of the buffers in the same direction at exactly the same moment of time and at the same speed. Thus the hairs, being solidly nipped between them, will be irresistably drawn out by the continuous simultaneous movement of the roll and the buffers, which are continually descending upon the roll, and the hairs which are sucked into the spaces between them by the wind-current generated by the buffer-blades in their revolution. Though I prefer this method of revolving the roll 16 as the cheapest and best, I do not confine myself to it. It may be geared or belted to the axis of the wheel or any convenient rotating point that is available. In front of this roll 16 I place a rod or roller 25, over which the pelts to be plucked are drawn. This rod has a movement to and from the roller 16 by means of the supporting-rods 26 26, the body push-bar 27, and the sliding rods 28 28, which slide into recesses in the table 1. Their forward motion is checked by the stop-collars 34 34 and their backward motion is obtained from the spring 29. This mechanism for actuating the rod 25 is not new. Any desirable means for giving the rod 25 a similar movement may be adopted. It will be seen that the roller 16 fills the space between the rod 25, which carries the pelt, and the point where the hair is plucked. This roller is unique in this position in that it serves a triple purpose. It first raises the fur and hair from the pelt by rolling or brushing it up with its corrugated surface. It then carries the extended fur and hair over its periphery and presents the tips of the hair to the elastic buffers. It then becomes the plucking element in itself by its pressure against the elastic buffers and simultaneous movement with them. In this action the wind suction between the buffers

is of great assistance in straightening out the hairs to be pulled and in carrying them off after pulling. As all this action is in plain view of the operator, he will advance the rod 25 just far enough to let the fur spread itself over the roller 16. The hair being much the longest is always in advance, and only the hair need be allowed to be nipped and pulled by the action of the machine. By drawing the pelt over the roller 25 it is thus freed from hair from end to end. It is also desirable that the pelt should have free side motion along the rod 25, and in my invention there are no boxes or any obstructions to this motion. In some cases the hairs are very rough and wiry, and for such I provide an additional roller 30, which operates above the pelt to roll down and direct the hairs toward the plucking elements. This roller is carried in end centers 31 31 from supports 32 32, and is driven by a belt 35, preferably from the shaft 3. In operation it touches nothing but the hair and is only an accessory and not a necessity of the mechanism.

Although I have adopted the arrangement of mechanism heretofore described as the best for the purpose, I do not confine myself strictly to it. Alternative forms may be used, such as fluted buffers and an elastic outer roll, or the making of both plucking elements elastic when used in the form of construction adopted by me.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a hair-plucking machine the combination of a hub, flat spokes radiating from the same, elastic buffers attached to the ends of said spokes, a roller 16 fluted longitudinally placed in front of and substantially parallel to said buffers and the axis of said hub, a bar 25 placed in front of and substantially parallel with said roller 16, space for the passage of a pelt being left between said bar and said roller, means to revolve the buffers which in their revolution contact with and revolve the roller 16 thereby raising the hair from the pelt when brought in contact with the roller, carrying it over its top and plucking it by the action of the buffers and roller combined substantially as described and shown.

2. In a hair-plucking machine the combination of a series of elastic buffers attached to spokes radiating from a common hub, a fluted roll 16 placed in front of them parallel to the axis of said hub, and means for adjusting the fluted roll horizontally to and from said buffers, substantially as described and shown.

3. In a hair-plucking machine, a fan, constructed of a hub, and blades connected therewith, elastic buffers arranged upon the peripheral extremities of said blades, and a case having inlet and outlet openings surrounding said fan in combination with a fluted roller 16 placed without the case, substantially parallel to the axis of said fan and

means for adjusting said roller toward or from said buffers for the purposes set forth, and substantially as described and shown.

4. In a hair-plucking machine, the combination of a rotating hub, a series of spokes radiating therefrom, elastic buffers attached to the peripheral extremities of said spokes, a case surrounding said hub and spokes, a fluted roller 16 placed parallel to said hub without the case, means for adjusting said roller to and from said buffers, an auxiliary fan 14 and a pipe 15 connecting said fan and case, substantially as described and for the purpose set forth.

5. In a hair-plucking machine the combination of a rotating hub, a series of spokes radiating therefrom, elastic buffers attached to the peripheral extremities of said spokes, a case surrounding said hub and spokes, a fluted roller 16 placed parallel to said hub without the case, means for adjusting said roller to and from said buffers, a bar 25 placed in front of said roller 16 with space for a pelt to pass between it and said roller, and means for moving the bar 25 to and from the roller 16, for the purposes set forth and substantially as described and shown.

6. In a hair-plucking machine the combination with a series of revolving elastic substances and a bar 25 placed in front of them over which a pelt is passed of a roller 16 interposed between the pelt and the elastic substances with which said roller comes in con-

tact and means for revolving the roller 16 in the opposite direction to the passage of the pelt for the purposes set forth and substantially as described and shown.

7. In a hair-plucking machine the combination of revolving elastic buffers, a movable bar for supporting a pelt, and a fluted roll interposed between said bar and said buffers all substantially parallel to each other with a second roll placed above the other at some distance from it, operating as a guide to the hair entering the machine substantially as described and shown.

8. In a hair-plucking machine, the combination of a hub and blades connected therewith acting in their revolution as fan-blades, elastic buffers attached to the peripheral extremities of said blades, means for revolving the same, a fluted roll placed in front of and parallel to said buffers operating therewith to pluck hairs, means for adjusting said roll to and from the buffers, a case inclosing said buffers having inlet and outlet passages, means for creating a wind-current through said case, a movable bar with means for actuating the same and a fan for removing the hair from said case substantially as described and shown.

CHAS. E. SACKETT.

Witnesses:

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EDWIN B. BARKER.